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Environmental Water Caucus

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June 30, 1998

Mr. Rick Breitenbach
CALFED Bay/Delta Program
1416 Ninth Street, Suite 1155
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Re: EWC Joint Comments on Draft EIS/EIR

Dear Mr. Breitenbach:

This letter represents the comments of the Environmental Water Caucus (EWC) on the CALFED Bay-Delta Draft Programmatic Environmental Impact Statement/Environmental Impact Report (DEIS/R). These comments reflect our global analysis of the DEIS/R and our vision for a positive Bay-Delta solution. Many members of the EWC also will be submitting more detailed comments on specific sections of the DEIS/R. This letter does not necessarily capture the full range of comments that will be submitted by each group, and should not be considered a substitute for careful consideration of all comments that our groups submit separately from this letter.

The CALFED program represents an extraordinary effort to seek protection for the Bay-Delta ecosystem and solutions for the many related issues. EWC recognizes the many accomplishments of the CALFED program and appreciates the hard work of the CALFED staff. At the same time, substantial work remains to be done before consensus can be reached on the selection of a preferred alternative. Our intent in submitting these comments is to provide constructive feedback and recommendations for modifying the proposed programs and environmental analysis so that a satisfactory outcome will be achieved for all. We look forward to working with you and your staff to answer remaining questions and proceed towards an acceptable solution.

I. Overview

The bulk of our comments relate to specific concerns regarding the common programs and project alternatives. However, certain common concerns emerge across all program elements and are summarized here.

1) The DEIS/R does not represent an adequate basis for decision making. As further discussed below in the body of our comments, the analysis in the DEIS/R is incomplete. In particular, the DEIS/R contains numerous information gaps, lacks key technical and economic analyses, and fails to consider an appropriately wide range of alternatives. We are encouraged

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that CALFED has recognized the document's shortcomings and has agreed to provide further environmental documentation prior to reaching a final decision.

2) The DEIS/R fails to fully articulate and analyze soft path approaches. The position of the Environmental Water Caucus continues to be that California must first improve the efficiency of existing water use and the operation of existing facilities, through conservation, recycling, transfers, conjunctive use, and operational changes, before developing new water supply projects or other expensive new facilities.

We urge CALFED to look at how system reoperation, coupled with conservation and markets, can meet all of the program goals Rather than rushing to build the next generation of unaffordable water projects (and asking the public to pay for them), CALFED should instead explore and implement any number of readily-available alternatives – such as water banking in existing facilities, acquisition of existing dams,[1] appropriately structured conjunctive use programs, water management benefits of wet meadow, floodplain, and riparian restoration, and a host of fiscal and market-based approaches – which can be used to promote improved water supply reliability and water use efficiency in a way that takes full advantage of California's already massively-plumbed waterscape. These are, we believe, the most cost-effective, flexible, and environmentally benign ways to achieve our common objectives over time. The DEIS/R fails entirely to establish that new storage is necessary to achieve CALFED's goals, nor does it include adequate analysis demonstrating that an isolated conveyance facility will benefit endangered native fishes or is necessary to meet water quality objectives.

3) All program elements should have clear goals, measurable objectives, and performance standards at the level appropriate for a programmatic document. As a programmatic document, the DEIS/R should contain specific goals and objectives for every program element. It will be necessary to develop these goals in order to monitor progress, to provide adequate assurances, and to develop criteria for phased decision-making.

While the strategic plan for the Ecosystem Restoration Program Plan (ERPP) lays out a path to develop goals and objectives for that program element, we strongly urge that these standards -- clear, measurable goals and objectives; the use of a strategic planning approach that relies on managing adaptively, testing hypotheses, and setting priorities; and independent scientific review -- be applied to all other major components of the long-term solution.

4) All program elements should be subjected to independent expert review. The ERPP has greatly benefited from such expert review and we strongly believe that all program elements, including water quality and water use efficiency, would benefit from a similar process. To date,

[1] For example, the Pacific Gas and Electric Company announced in mid-June that it will decide by this summer whether to sell or spin off to shareholders some 68 hydroelectric plants in California involving approximately 3.2 MAF of surface storage capacity with an estimated book value of $1.2 billion.

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CALFED has relied heavily on workgroups that are typically dominated by urban and agricultural water users to develop many of the common programs. Independent expert review would greatly increase the program's credibility.

5) CALFED must better evaluate the interrelationships of program elements. While the DEIS/R makes many references to the links between the various program elements, the impact analysis does not reflect these links. CALFED must do a more thorough analysis of the impacts of program links. For example, the water quality benefits of water use efficiency actions should be quantified. These links should be modeled so that impacts can be appropriately reflected in the DEIS/R, and monitored, so that feedback can be incorporated into later phases of the CALFED program. Where quantification is not currently possible, CALFED should outline a strategy to develop such information during the early phases of program implementation.

6) The DEIS/R fails to establish a comprehensive environmental and financial baseline. A more comprehensive accounting of <u>all</u> aspects of Bay-Delta water development is essential to clarify the starting point of the CALFED program and to monitor and evaluate the future impacts of the CALFED program. If it is to meet its own "durability" objective, a CALFED solution must include meaningful and comprehensive groundwater management, a finite water-depletion budget, comprehensive water metering, and a robust and protective ecosystem baseline, from which we can evaluate changes.

<u>II. Common Programs</u>

A. Ecosystem Restoration Program Plan

The ERPP fails to provide an ecosystem restoration plan capable of meeting CALFED's program objectives. Most critically, it lacks clear performance goals and targets and a coherent plan for achieving such targets. We agree with the findings in the DEIS/R that there are major unresolved technical issues in the ERPP regarding diversion effects on fisheries and Delta flow patterns, and that a technical effort to address these issues is necessary. In addition to these issues, we raise the following concerns.

It is clear that the outstanding issues regarding diversion effects on fisheries cannot be resolved in the near term. It is just as clear, however, that a final CALFED decision cannot be made prior to resolution of these outstanding issues. Therefore, CALFED's technical effort should focus on developing a program of research, experimentation and assessment. Any final CALFED decision regarding water management and ecosystem restoration must be phased to allow full incorporation of the results of these technical analyses.

For instance, it is not possible to evaluate whether CALFED's habitat improvements can offset diversion effects unless, first, the Delta habitat restoration and management measures of the ERPP have been described in greater detail (in other words, a clearer picture of the "restored" Delta is available) and reviewed for consistency with the strategic plan when completed, and, second, on-the-ground implementation of the ERPP has been evaluated for actual performance.

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It will be extremely difficult in the foreseeable future to assess the relative contribution of various habitat improvements and stressor reductions toward achieving endangered species recovery or other objectives. Given the complexity of the system and the level of uncertainty, the Program should assume that a comprehensive approach -- one that includes significantly reducing diversion effects on fisheries, restoring habitat conditions and investigating the influence of other factors on fishery objectives -- is necessary.

The focus of the Program's technical effort to resolve this issue subsequent to the release of the DEIR has been on salmon, Delta smelt, and striped bass. EWC believes that CALFED should conduct a comprehensive evaluation of the effects of habitat improvements on all species directly impacted by entrainment or indirectly impacted by changed Delta flow patterns, including splittail and steelhead, in order to resolve this issue.

CALFED should expand its efforts in the following areas:

- Near term species protection is critical. CALFED should further examine how reoperation of the existing system incorporating operational flexibility, transfers, conjunctive use, improved instream spawning and attraction flows through acquisitions, etc., can assist in accomplishing this goal.

- The effects of contaminants on many species of concern are largely unknown. CALFED should commit serious effort to determining the effects of various contaminants such as mercury and selenium on the health of various species. Additional study is also needed on the impacts of these contaminants on seafood consumption safety.

- At this point it is not possible to quantify the benefits to species of concern (i.e., increase in food supply, less predator effects, filtering of toxics, etc) of shallow water habitat restoration in the Delta. CALFED should define "shallow water habitat", better describe its expectations for shallow water habitat restoration, and outline a series of sampling and monitoring protocols that will accompany restoration.

- The effects of exotic species on native species in the estuary are largely unknown. CALFED should further examine impacts associated with species-to-species and species-to-habitat interactions, as well as develop a plan to prevent future introductions.

- The recovery or restoration of fish species of concern is a critical component of the ERPP. However, CALFED has not made an attempt to define these terms. CALFED should determine, with the appropriate regulatory agencies, what is a large enough population to avoid "jeopardy" in contrast with " truly sustainable" populations given the inherent variability that exists on a range of levels. CALFED should use the Delta Native Fishes Recovery Team report in developing these estimates.

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- Adaptive management is key to the successful restoration of the species of concern and of the ecosystem in general. CALFED should better define - in detail - how it foresees using the principles of adaptive management to provide near term species protection while moving towards long term ecosystem restoration.

CALFED should sponsor independent scientific review of its technical efforts to resolve these and other outstanding issues.

Trinity River
The DEIS/R, the Watershed Management Strategy, and the ERPP inappropriately omit the Trinity River Basin from maps which delineate the "problem", "solution", and even "study" areas for Program effort.[2] This omission is inconsistent with the March 13, 1998 consensus recommendation of the CALFED Ecosystem Roundtable to include the Trinity River basin in the ERPP project area.

The DEIS/R does not describe the impacts of the alternatives on the Trinity River Flow Decision required by Section 3406(b)(23) of the CVPIA. CALFED should remedy the deficiencies of this draft, by including the Trinity River basin on the appropriate maps, by evaluating the impacts of the alternatives on the Trinity River Flow Decision, and by improving the Environmental Justice and Indian Trust Assets sections of the document.

Tulare Basin
The Phase II Interim Report includes a map of the watershed for the Sacramento/San Joaquin Delta. The Ecosystem Restoration Program Plan should include, at a minimum, this entire area. This means adding a Tulare Basin Ecological Zone, which was historically and is currently hydrologically connected to the San Joaquin River.

San Joaquin River
The Ecosystem Restoration Program Plan inappropriately excludes the main stem of the San Joaquin River from consideration. Friant Dam blocks virtually the entire flow of the San Jaoquin River, rendering large stretches of the river dry in most years. In average hydrologic years, no water from the upper San Joaquin reaches the Delta. The dewatering of the San Joaquin in the 1940's extirpated spring and fall runs of chinook salmon, steelhead, and other native fish from the San Joaquin river upstream of the Merced. It also caused the loss or degradation of thousands of acres of riparian forest and wetlands between Friant Dam and the Merced River including the remarkable wetlands of the San Luis National Wildlife Refuge complex and the Grasslands Ecological Reserve.

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[2] Due to massive diversions out of the Trinity River for more than thirty years, the Trinity River Basin is now artificially linked to the Bay/Delta. These diversions have caused extensive destruction of Trinity River resources and Tribal trust assets, including the chinook salmon fishery.

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It will not be possible for CALFED to create an equitable and durable solution for restoring the Bay-Delta ecosystem while ignoring one of the major tributaries in that system. Any restoration program that continues to leave the San Joaquin system dry not only fails to meet the CALFED solution principles, but also misses the tremendous opportunity to create large amounts of habitat, creating benefits for salmon and other fish and wildlife. Ultimately, a restored ecosystem, including a restored San Joaquin River, is the only way to provide long-term water supply reliability.

Furthermore, conditions on the San Joaquin River have led to deterioration of water quality in the Bay-Delta, due in part to increased salinity and other negative impacts of Friant Dam operations on the Bay-Delta. Restoring the San Joaquin could generate significant water quality improvements for drinking water, for the ecosystem, and for Delta farmers.

A recent decision by the federal Ninth Circuit Court of Appeals held that the federal government failed to adequately consider the impact of Friant Dam operations on endangered species. It also rejected the irrigators argument that the Central Valley Project Improvement Act preempts California State Fish and Game Code Section 5937 which requires that all dam operators to release sufficient water to maintain the fishery below the dam. In light of this ruling, CALFED must revise the ERPP to address restoration of the San Joaquin River.

B. Water Use Efficiency

CALFED will not be able to develop a meaningful and effective water use efficiency program until it adequately defines efficiency in its broader sense.. Instead, CALFED invents its own definition of efficiency, saying "efficient water use is characterized by the implementation of local water management actions that increase the achievement of CALFED goals and objectives." (WUE Technical Appendix p. 2-1) While we support the notion of local water management actions that help achieve CALFED goals, that is certainly not synonymous with efficiency.

We strongly urge CALFED to incorporate basic economic principles into its water use efficiency common program, and to subject the water use efficiency program to review by a panel of economists and other experts. The water use efficiency program will have no credibility until it reflects basic economic principles about supply, demand, and price.

The single most important thing that CALFED can do to promote efficiency is to refrain from including in the CALFED program any new subsidized water supply projects. Creating additional subsidized water reduces the incentive for water users to invest in efficiency improvements.

Conservation Potential

CALFED vastly underestimates the potential for water conservation in both the urban and agricultural sectors. CALFED incorporates many of the flawed assumptions of DWR's Bulletin

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160-98 into its projections about current water use and the potential for water use efficiency. Some of the problems carried over from Bulletin 160 include the following:

- DWR mischaracterizes current demand. Recent estimates by the California Research Bureau indicate that DWR overestimated urban demand by 1.6 MAF in the 1995 base year.

- Furthermore, as a result of this flawed baseline data, DWR has developed flawed projections of future demand. DWR past projections about water use have consistently exceeded actual use. Without an accurate baseline on current water use, or a reasonably accurate projection of future demand, it is not possible to develop appropriate water supply reliability measures, or to accurately assess the costs and benefits of any proposed facilities or other water management actions.

- CALFED adopts from Bulletin 160 the assumption that full implementation of the urban Best Management Practices will generate 1.5 million acre feet of conserved water. However, neither Bulletin 160 nor the CALFED DEIS/R demonstrate how that estimate was generated. NEPA and CEQA require that CALFED provide all of the supporting information and assumptions necessary to evaluate the accuracy of that estimate.

- There appears to be a serious accounting error in Bulletin-160, that is carried forth into the CALFED estimates of water conservation potential. This error relates to whether conservation is credited as providing a reduction in the need for future supplies. We believe that the disparity with how inland vs. coastal conservation is counted may not be justified.[3] We request that CALFED carefully consider this issue and recalculate its estimates of conservation potential

- Similarly, it appears that CALFED adopted Bulletin 160's flawed assumptions regarding the potential for savings from agricultural water use efficiency. In particular, CALFED assumes that no savings can be achieved from changes in evapotranspiration (ET).

  Changes in evaporation, such as changes that can be achieved from installation of drip irrigation or other micro-irrigation technologies, reduce the evaporation component of ET. This is a reduction in consumptive use, and should be included in CALFED's estimates of real water savings. Because agriculture uses such a large amount of water, a small reduction in the percentage of applied water lost to evaporation can yield tremendous water savings. Even if some of the reduction in evaporation is made up by increased transpiration, this

[3] This issue, which has been raised with CALFED staff, is more fully described in the attached May 20, 1998 memorandum from the Pacific Institute entitled "Application of Applied Water/Real Water/New Water Distinction in Bulletin 160-98 and CALFED DEIR/DEIS." The memorandum explains that the distinction between "real" and "applied" water is only relevant in situations with fixed demand.

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increase is probably not one for one. CALFED should revise its analysis to reflect the potential water savings through reduction in the evaporation component of ET.

Additionally, the DEIS/R fails to address potential water savings associated with changes in the transpiration element of ET. CALFED has inappropriately excluded from the DEIS/R analysis these potential savings, such as those associated with land fallowing or crop shifting, even though the California Water Code considers these changes to be conserved water.

- Additionally, CALFED calculates the potential for improvements in agricultural water use efficiency based on an assumed existing level of 73% efficiency. There are several reasons to question this assumption. First, CALFED believed that it was adopting Bulletin 160 information by assuming existing efficiency of 73%. However, Bulletin 160 does not say that we have already achieved 73% efficiency. Instead, it sets 73% as the level of efficiency that will be reached by 2020.(Bulletin 160, p.4-36) Therefore, the existing level of efficiency according to Bulletin 160 is lower than 73%, and the corresponding potential for improvement is greater.

  Second, DWR and CALFED's method for calculating existing efficiency is questionable. Those estimates are based on mobile lab analyses which can test only distribution uniformity. To calculate efficiency from distribution uniformity the lab technician must know the amount of water applied to the field (which is necessarily estimated in most cases due to lack of universal water measurement) and must know the amount of tailwater leaving the field (again, estimated). This technique obviously has a high margin of error.

  EWC believes that in Phase 1 of its program CALFED must gather more accurate data on existing levels of agricultural water use efficiency.

- Bulletin 160 and CALFED treat supply and demand as independent quantities despite basic economic theory. Demand does not exist in a vacuum but rather is tied to willingness to pay a particular price for a particular good. Price, if allowed, will work as an equilibrating mechanism to balance supply and demand over time. The water use efficiency program inappropriately excludes consideration of pricing mechanisms to improve water use efficiency. Experience shows that water users will respond to price increases in a variety of ways, including investment in efficient technologies, more intensive water management, fallowing of marginal lands, changes in cropping patterns, etc.

- The cost estimates for conservation measures reflected in the DEIS/R appear to be far too high. CALFED should consult with a wider range of sources in developing these numbers, and also to revise the numbers to reflect that in many cases, such as in new construction, the additional or "marginal" cost of choosing efficient technologies or low water use landscaping is zero.

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Implementation and Assurance Issues

Once CALFED has correctly calculated the potential for urban and agricultural water conservation, it is still left with the task of developing a program that will reach that potential. The common program described in the DEIS/R is inadequate to achieve that goal.

Urban Implementation

As CALFED knows, representatives of EWC and CUWA have been meeting to develop a joint proposal to CALFED on the urban water use efficiency element of the program. The goal of these discussions has been 1) to develop what would be considered the minimal requirements to meet the CALFED objective of providing a high base level of conservation, and 2) to develop a certification and enforcement program that would assure high levels of compliance.

The DEIR reflects the ongoing communication between CALFED and this CUWA/EWC group, and we support the proposal as it is reflected in the DEIS/R. However, this joint proposal, which is based on more widespread implementation of the best management practices contained in the Memorandum of Understanding Regarding Urban Water Conservation in California (MOU) still leaves on the table a great deal of untapped conservation potential. While CUWA and EWC have agreed that fulfilling obligations under the MOU is an acceptable minimum level of conservation to obtain CALFED program benefits, this does not mean that CALFED should not seek further urban conservation. Rather, CALFED should identify the remaining conservation potential achievable (e.g., by implementing BMPs above the levels specified in the MOU, or through implementation of additional conservation measures, especially those targeting outdoor water use) and develop a program to obtain those savings. CALFED should offer financial assistance to help meet those higher goals, and should incorporate those higher goals into the criteria for phased decision making.

Agricultural Implementation

CALFED has based its agricultural water use efficiency element on the MOU that emerged from AB 3616.[4] Regardless of whether fulfilling the requirements of the agricultural MOU are voluntary or mandatory, that program will not significantly improve the efficiency of California agriculture. The requirements of the MOU are not sufficiently rigorous as to require any real change in water use. Assuring implementation of an inadequate program is not the same thing as assuring efficient water use.

It is inaccurate for CALFED to state that the Agricultural MOU "provides a process for balanced review and endorsement of plans and implementation progress reports" (WUE p 2-11) when almost every environmental group which works on water issues has disapproved of the MOU as inadequate. This can hardly be called balanced process and certainly does not offer the level of assurance that CALFED has acknowledged is critically important to the water use efficiency program.

[4] The Natural Heritage Institute is a signatory to the AB3616 agreement and does not concur with this section of the EWC comments.

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Environmentalists were involved in the early stages of developing that MOU, but most left that process when it became apparent that the agricultural interests who were negotiating the MOU were not willing to adopt a program that would make real changes in water use efficiency, and indeed, were just looking for a public relations mechanism to give them cover in a process such as CALFED. We are extremely disappointed that CALFED essentially has ignored the almost universal lack of support for the AB3616 program among environmental stakeholders.

AB 3616 is a planning based program that only requires districts to consider various measures. Furthermore, the program completely ignores farm-level conservation which is where irrigation choices and cropping choices are made and where most of the water savings are likely to occur. For a more detailed explanation of our substantive concerns with the agricultural MOU, see the attached letter of April, 1997, which we include with these comments for the administrative record.

While we support the addition of measurement and pricing criteria as a precondition to receiving CALFED program benefits, as suggested in the DEIS/R, we do not believe that requirement alone will realize the full potential of improved efficiency. In addition to the measurement and volumetric pricing requirements, we recommend that CALFED develop clear goals, measurable objectives, and interim targets for the agricultural water use efficiency program. Additionally, CALFED should develop performance standards for each efficient water management practice, comparable to the standards contained in the urban MOU.

Water Recycling

Water recycling is one of the least controversial elements of the water use efficiency program. To assure that the levels of water recycling anticipated by the CALFED program will happen, CALFED funding assistance will be needed. EWC would be willing to support public-partnership financing for water recycling, given its potential benefits to the ecosystem by reducing demands on the system.

We support the concept of a water recycling BMP, as suggested in the DEIS/R. However, CALFED should not wait for the Urban Water Conservation Council to develop and adopt such a BMP. In the past the Council has failed to adopt a BMP because the individuals involved in the Council are not the same ones as the ones in recycling, and because the Council is already occupied with implementation of the existing BMPs. CALFED should not abdicate its responsibility for assuring that recycling is given adequate evaluation by water agencies, but should instead take a leadership role in developing this BMP. EWC is interested in working with CALFED and the other stakeholders to develop this BMP.

As with other program elements, CALFED should establish specific goals and objectives for water recycling. These targets should be included in the criteria for phased decision making. The amount of water recycling is easily measurable and lends itself well to development of a performance measure.

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Land Retirement
The west side of the San Joaquin valley contains close to half a million acres of salinity impacted lands, many of which are also high in trace elements such as selenium. A variety of state and federal programs have authorized removing much of these lands from irrigated agriculture on a voluntary compensated basis. Despite the large amount of recent rhetoric about such voluntary land retirement programs, we have reason to believe that if the program is properly targeted to the lands with drainage problems, there would in fact be a high level of support throughout the state for a voluntary program to purchase those lands from willing sellers. Indeed, even while individuals claiming to represent San Joaquin Valley farmers were attacking the Bureau of Reclamation's land retirement program, many of those farmers were actually signing up for the voluntary program.

Voluntary, compensated retirement of marginal quality lands on the west side of the San Joaquin Valley is likely to have multiple benefits that could help meet the CALFED objectives in many areas, including water quality, water supply reliability, and ecosystem restoration. CALFED's preliminary analysis showed that a voluntary land retirement program could generate 1.5 million acre-feet of water at an average cost of $150 per acre foot, which is significantly less than the cost of many other supply augmentation options under consideration. This preliminary analysis, and the more thorough evaluations which must follow it were inappropriately excluded from the DEIR. CALFED should continue to refine the analysis, including exploring mitigation of third party impacts, and should include this analysis in subsequent environmental documentation. Also, the water supply impacts of this land retirement proposal must be included when modeling system operations and water supply reliability.

Impact Analysis
Table 3-1 summarizing the environmental consequences of CALFED Bay-Delta Program Alternatives fails to recognize many of the benefits of water conservation programs. Specifically:

- The water quality benefits from improved water use efficiency, including reduced loads of pesticides, and trace elements such as selenium, salts, and sediment, are not included under the description of how the common programs benefit water quality.

- Under water supply and management the Table fails to include the ability of water use efficiency measures to improve water supply reliability.

- Under Agricultural Economics the analysis fails to indicate how water use efficiency measures can improve sustainability by enabling farmers to maintain the same level of economic productivity by maintaining or increasing yield even with a reduced water supply. Water use efficiency can also save costs on other inputs such as pesticides and fertilizers, by allowing more efficient applications, as well as saving on energy costs.

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- Under agricultural social issues the analysis fails to account for jobs that may be created by more intensive irrigation water management.

These impacts should all be reflected in CALFED's impact analysis.

C. Water Quality

The current Water Quality Common Program falls far short of articulating a comprehensive vision necessary to improve water quality in the Bay-Delta ecosystem and for beneficial uses of this water throughout California.

We support the recent process initiated by the Water Quality Technical Group to further refine program objectives and actions and the commitment to convene an expert review panel to address drinking water quality issues. Further work is needed to develop a more robust, grounded, and scientifically supported program.

Drinking Water Quality

EWC believes that safe drinking water is a critically important environmental and public health issue and we are committed to working with CALFED to determine the best way to meet current and proposed drinking water standards. We agree with the DEIS/R that "current health effects research and treatment technology information...do not now provide an adequate basis from which to project what the water quality parameters for drinking water standards, or what the treatment options to meet those standards, are likely to be over the next 5-10 years." (Phase II Interim Report p 137). CALFED should be phasing decisions over the next 5-10 years in order to evaluate how well the water quality program and related common programs perform.

Delta water quality meets current and proposed standards (expected in November 1998.) At least one water system which relies exclusively on Delta water, Contra Costa Water District (CCWD), is showing that currently available treatment technologies can be applied to larger water systems and prove a very effective way to protect drinking water quality for consumers. CCWD has total trihalomethane levels (~10ppm) that are well below even the most stringent standards (40ppm) expected for these byproducts in the next round of rulemaking by EPA. CCWD also performs quite well on limiting bromate formation in their treatment process. Their successful methods need to be evaluated for other delta water users.

Drinking water treatment technology is changing rapidly and becoming more affordable. Water systems will have to comply with any stricter standards set early in the next century years before any of the conveyance or storage options identified could be built. This means water systems will have to come up with system specific strategies to comply in the near-term. If urban water districts have no need for the engineered projects when they come on line, they may be unwilling to pay a share of the costs, leaving the taxpayers with enormous stranded assets. For all of these reasons it is premature to select a one-size-fits-all-engineering solution to improve export water quality.

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Enforcement
CALFED should not limit itself to cooperative programs to meet water quality objectives. CALFED agencies have direct enforcement/ regulatory control over water quality including nonpoint source pollution. CALFED needs to use a complete toolbox for achieving water quality objectives.

CALFED must include full implementation of existing laws and programs as part of the baseline. As currently written, the Water Quality Program fails to identify the tools available to the government to enforce controls when voluntary programs prove ineffective. The next draft of the DEIS/R should identify relevant legislative and administrative authorities, particularly with respect to enforcement. For example, the Porter-Cologne Water Quality Control Act, Calif. Water Code 13000 et seq., gives the state the authority to regulate dischargers of nonpoint source pollution through the issuance of waste discharge requirements. In addition, the CZARA Section 6217 program also requires the state to implement and enforce measures to control polluted runoff.

The Program should include a discussion of available legislative and administrative tools, and identify clear, specific and automatic triggers for moving from voluntary implementation or incentives to the use of enforcement tools. This should include a program to track voluntary water quality improvement activities and results for a set period through mandatory reporting. If inadequate progress is achieved via voluntary compliance within that time period, or if reports on voluntary activities are not prepared, then the state should automatically move to regulatory enforcement of the action items.

Coordination with Other Water Quality Programs
The Water Quality Program should contain a process for coordinating implementation of CALFED Action Items with implementation of existing, related programs, such as the Coastal Nonpoint Pollution Control Program, established by the Coastal Zone Reauthorization Amendments of 1990 ("CZARA"), Section 6217 (16 U.S.C. § 1455b), to control polluted runoff. The State Water Board and the Coastal Commission, which jointly administer this program, have decided to implement it statewide.

Similarly, the State Water Board is mandated to control polluted runoff under Section 319 ("Nonpoint Source Management Programs") and Section 303(d) ("Total Maximum Daily Load" program) of the Clean Water Act. CALFED pollution runoff activities should be closely integrated with these related pollution runoff activities in order to maximize the effective use of limited funds. CALFED should insist that the State Board (and appropriate Regional Boards) establish TMDLs for parameters of concern in the Delta, and should include development and implementation of TMDL's as a benchmark in the staged decision-making process.

Integration with Other Program Elements
The water quality element must be better integrated with other program elements such as the ecosystem restoration and water use efficiency common programs. While integration of the various common program elements is a critical step in implementation of the CALFED program, little progress has been made in quantifying water quality benefits (or adverse impacts) from other common programs. The next draft should identify these interconnections more specifically and outline the research necessary to more fully evaluate potential impacts of proposed actions.

Absent a better understanding of how the ecosystem, water use efficiency, watershed management, and levee programs will affect delta water quality, it is premature to make a decision on conveyance. For instance it is not possible to quantify potential reductions in total organic carbon -- a significant drinking water treatment concern -- without integrating the impacts of all of the above programs. The same can be said for the quality of agricultural drainage return flows and reductions in pathogen loads.

The DEIS/R also does not adequately evaluate the impacts on delta water quality of changing the relative balance of Sacramento and San Joaquin waters in the Delta. Each of the conveyance alternatives as proposed could have dramatic consequences on loadings of various parameters of concern. The impacts of diverting or rechanneling substantial amounts of Sacramento River flows, barricades at Old River and other proposed approaches could dramatically alter contaminant loadings in the Delta such as selenium and pesticides. Dredging under the conveyance alternatives could unleash huge loads of metals like mercury and copper into the system with consequences for fish and human health alike.

Data Gaps/Additional Research
In other areas of the water quality program there are huge gaps in information that need to be closed prior to a decision being made on a preferred alternative. Further scientific investigation and analysis is needed about the most cost-effective way to achieve drinking water quality objectives and maximize public health protection without sacrificing the health of the Delta ecosystem. In addition to the scientific and regulatory uncertainties that were discussed earlier, many variable conditions face water systems that use water from the Delta. Also discussed earlier is the lack of quantifiable data available on source reduction efforts for TOC, pathogens, and agricultural drainage.

System to system differences in treatment approach, system size, quantity of Delta water/other water sources, quality of other water sources used, adequacy of source protection efforts within the system (at reservoirs) are just some of the variables that impact treated water quality. These must be addressed and solutions modeled for impact as well as cost.

The Water Quality Program currently focuses its bromide modeling on levels found at Clifton Court, but levels at San Luis due to bromide concentrated in agricultural return water may also be significant and have an adverse impact on water quality for many users. It is essential that CALFED develop a full understanding of the sources of bromide contamination in the Bay/Delta

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system so that recommended water quality actions address the real problems. Other sources of bromide in the system and control strategies must be addressed in CALFED's subsequent environmental documentation.

Nutrient loading from agricultural drainage and other runoff into waters south of the Delta have not been adequately addressed for their contribution to degraded water quality. Under some alternatives we may be spending billions to start with a "cleaner" source only to continue to degrade it on its way to the end user. It may be more cost effective to focus on water quality improvements that can be made to water as it moves through the rest of the system rather than putting all of the investment in moving the delta intake.

We urge CALFED to dedicate the necessary resources to a basic research and comprehensive monitoring program in the Delta and its tributaries. This research and monitoring should be geared toward developing a better understanding of mass loading, spatial distribution, transport, fate, and synergistic effects of contaminates in the estuary and their impacts to biological life and human health. Contaminate issues include pesticides, selenium, mercury, nutrient loading, as well as sources of "unknown toxicity."

Finally, the USFWS/NMFS Section 7 draft biological opinion on the California Toxics Rule (CTR) states that the proposed numerical criteria in US EPA's CTR are not protective of aquatic life and pose significant threat to the recovery of endangered and threatened species. In so far as EPA's CTR criteria are incorporated into the CALFED program, they will not promote recovery of listed species.

D. Levee Stability

The levee protection program as described in the DEIS/R continues to be one of the weakest elements of the Program, and we have been extremely disappointed with the lack of an adequate response to our previously expressed concerns. This program appears to be predicated on a number of questionable assumptions regarding the long-term sustainability of the Delta islands, and ignores basic issues regarding the environmental and economic factors associated with current Delta land use. Furthermore, we find little evidence of the integration between the levee protection program and the ERPP which is referred to in the DEIS/R.

The importance of these issues was acknowledged in the CALFED Bay-Delta Program Phase I Final Documentation Report (September 1996). In that report, the Program recognized the need for:

- "a risk-based benefit/cost analysis including consideration of converting land vulnerable to levee failure to areas of improved habitat" (p.31).

- "an expert panel to provide advice on long-term sustainability of Delta habitat and infrastructure" who will consider options including "a mix of actions that allow for the

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gradual, phased, large-scale restoration of leveed islands to a mixed mosaic of uses emphasizing high quality habitat" (p.39).

- an examination of "such factors as (1) the environmental and economic costs and benefits resulting from major conversion of land to environmental purposes; (2) the long-term sustainability of the Delta islands, given the economics of farming, the risks of permanent flooding from seismic and other causes, and the costs of levee maintenance repair and subsidence control..." (pp. 39-40).

The Program has utterly failed to develop a comprehensive evaluation of the long-term sustainability of current Delta land use. The Delta levee technical workteam effort sponsored by the Program is focused on maintenance of the existing levee system and is not adequate to develop this information. We strongly urge the Program to initiate the analyses identified in the Phase I report, including appropriate independent scientific review.

E. Watershed Management

CALFED's draft watershed strategy is not a strategy -- it describes the intent to develop a watershed strategy based on an as-of-yet undefined process. The document does a reasonable job of describing the major issues, including accountability, implementation, and monitoring, but fails to establish a clear process for addressing these issues. The document also fails to describe how the watershed element will integrate with other elements, especially ecosystem restoration and water quality.

III. Project Alternatives

CALFED has failed to examine a reasonable range of alternatives. The DEIS/R has looked only at structural options for addressing water management issues. In its next round of environmental review CALFED should consider an alternative that maintains the existing Delta configuration (with minor changes such as moving the Clifton Court intake to the northeast corner and installing more effective screen and bypass systems) but operates this configuration to maximize restoration potential. This should include modeling operation of a fish-friendly pumping schedule, delayed filling of San Luis Reservoir, flexible export/import ratios to decrease impacts during low flow periods, etc. These scenarios should also include expanded use of water transfers, conjunctive use, conservation and recycling to mitigate economic impacts, if any, of this operational regime.

Fishery sampling and monitoring programs have documented the long term decline of anadromous and estuarine fish in the Central Valley watershed which has coincided with increased water exports from the Delta. Impacts on fisheries include both direct entrainment effects as well as indirect effects. CALFED must better determine mortality associated with indirect effects of water export prior to increasing export capability in the Delta.

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A. Storage

California already contains vast amounts of surface storage. Approximately 5,300 dams – roughly 2,000 "large" dams and another 3,300 "smaller" dams (below 25 feet in height or 50 AF of capacity) -- have been constructed throughout California during the last 50-100 years. Our statewide surface storage capacity (including California's apportioned share of Colorado River storage) already exceeds 60,000,000 acre feet.

California's dams – located on every major river but one throughout the entire Bay-Delta system -- have combined to cut off access to more than 80 percent of the historical spawning grounds and in-stream habitat for rearing and migrating salmon and other migratory and resident fish species. Similar statistics apply to the loss of floodplain and channel interactions, wetlands, and riparian habitat, from the construction of several thousand miles of levees, which provided habitat for fish and waterfowl, migratory birds, and thousands of other species. More than 90 percent of the Central Valley's riparian and wetland acreage has been lost due to the land and water development practices of the last 150 years.

During the last 30 years, Delta exports have grown from approximately 1.5 million AF/year to an average of 6.0 million AF/year, with a 1989 peak of 6.7 million AF. During this time, populations of longfin smelt, Delta smelt, striped bass, steelhead, and every run of chinook salmon except the hatchery-dominated fall-run have declined by 80-95 percent or more from their 1967 base. (Data are only sporadically available before that time.) The San Joaquin River's mainstem spring run chinook population went extinct in the early 1950's, following completion of Friant Dam.

Taken together, the combination of existing federal, state, and local water projects impound, regulate, divert, and ultimately deplete half of the runoff into the Bay-Delta system in an average year, and as much as 70 percent or more in drier years.

The DEIS/R contains little if any evidence demonstrating that additional surface storage is needed as part of the CALFED program. Certainly before we decide to build additional dams and reservoirs we should explore the opportunities for market based mechanisms and conservation strategies to yield similar benefits for water supply reliability.

Additional diversions to storage will create new environmental impacts, including increased potential for direct entrainment and indirect impacts. Creation of these reservoirs will, of course, have terrestrial impacts as well. CALFED has not only failed to fully assess these impacts, it has not disclosed the unit cost of developing this water and compared it to other alternatives. CALFED should evaluate these costs, including dry year figures, and compare them to the cost of water supplies developed through conservation, recycling, reclamation or transfers. The external costs of any new project must be internalized to reflect a better estimate of the "true" project costs.

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Many of CALFED's studies incorporate options for "environmental storage" in new reservoirs at offstream locations both north of and south of the Delta. Water would be diverted to these reservoirs during periods of high flows and released back into the river to meet the ERPP pulse flow targets. The DEIS/R contains little if any evidence that storage for environmental purposes would be possible or effective. There is no analysis of how or whether these hypothetical environmental benefits would offset the considerable environmental harm entailed in the diversion of even more water out of the system. As noted in the Phase II interim Report, "The validity and appropriate role for "the time value of water" concept in California water management have not been fully discussed within the stakeholder communities. Additional work remains to identify and resolve controversy related to the concept, determine specific parameters (flow rates and timing), and scientifically evaluate the potential effects of this approach. (Phase II Report p.33)

We question whether environmental storage is either the most cost-effective or environmentally sound approach to securing new water supplies for the environment.. Other means, including a water acquisition program, should be explored on a per-unit cost and environmental impact basis to obtain water supplies for the environment. As with other program elements, the acquisition of these water supplies should include appropriate protection for the source watersheds.

Conjunctive Use

To the extent that additional storage is ultimately found to be necessary for the CALFED program, EWC believes that CALFED should first maximize development of environmentally sensitive conjunctive use projects. Such programs would divert water to the groundwater basins most suitable for immediate storage and eventual extraction. It would then be extracted and used to supplement available surface water during drier years. This would be new water, not otherwise available to the system.

CALFED vastly underestimates the potential for groundwater storage. The currently unused aquifer space is certainly several times greater than the CALFED target of 750,000 AF. CALFED's own analysis shows that the groundwater storage potential at just three sites exceeds their target by 250,000 acre feet.

Many people have dismissed the potential to increase water system yield with groundwater banking with the argument that it is impossible to develop the recharge capacity to capture a significant amount of unused flood flows. This argument is based on the erroneous assumption that the only way to increase system yield is to build large new conveyance and groundwater storage infrastructure that can capture unused flood flows. Such infrastructure would have to handle very large volumes of water in short periods of time and would be clearly unfeasible. CALFED should explore different, non structural method of increasing system yield by delivering water in surface reservoirs, directly or indirectly, to groundwater reservoirs throughout the year, thereby freeing up space in existing reservoirs to capture a larger fraction of large flood flows when they do occur.

The absence of comprehensive groundwater management or even universal water measurement will hinder maximum conjunctive use. By failing to include such mechanisms in its DEIS/R CALFED has unnecessarily limited the potential of what is likely to be the most environmentally benign water storage option.

B. Conveyance

Two principal reasons have been given for development of an isolated facility. First, it is argued that the canal would provide higher quality water for south-of-Delta consumptive use, a particular concern of urban agencies. Second, an isolated facility has also been promoted by some as at least a partial solution for Bay/Delta fisheries. In addition to these two reasons, there is clear but often downplayed potential for an isolated facility to be used to increase project yield and overall depletions.

Conveyance and water quality

As discussed above under water quality issues, we believe that there may be more cost-effective approaches to addressing drinking water concerns than constructing an isolated facility. CALFED's initial efforts to address water quality should evaluate the cost of meeting standards (2 or 3 distinct levels of protection should be evaluated due to the uncertainty of future standards) with or without an isolated facility.

Some of the means other than an isolated facility to address water quality issues that CALFED should consider include:

- Installation of a flexible barrier to separate higher quality water from lower quality water in the California aqueduct.
- Changes in the timing of filling San Luis Reservoir. It may be possible to obtain higher quality water by waiting for high flow events rather than filling the reservoir as early as possible. While this does create additional risk regarding water supply reliability, the trade offs of such an approach should be clarified and evaluated.
- Reoptimize the existing system.

Fisheries

There are many more "unknowns" regarding the relationships between hydrodynamic shifts in the estuary (as a result of export pumping) on the resultant direct and indirect effects on fish species of concern in particular, and the ecosystem in general, than there are "knowns." Though we have some ability to quantify the direct mortality of salmon and other species at the export facilities, we have limited understanding of indirect effects that lead to mortality.

An obvious gap in CALFED's analysis is its lack of species breadth. CALFED appears to be concerning itself only with Sacramento and San Joaquin salmon (winter run, spring run, fall run, late-fall run, and SJ fall run), Delta smelt, and striped bass while ignoring other important species including steelhead (now currently listed as threatened under FESA), splittail (proposed for listing as threatened under FESA), longfin smelt, and green and white sturgeon. Each of these

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species and lifestages within each, has in some cases very different habitat requirements and temporal and spatial distribution throughout the Central Valley watershed.

Given not only the level of uncertainty that exists and the limited scope of CALFED's diversion effects on fisheries analysis, and CALFED's failure to define its assumptions regarding fisheries protection and restoration goals, CALFED should not make a decision on how, or whether, the Delta should be reconfigured at this time. Instead, CALFED should focus its efforts on increasing our understanding of the ecosystem and determining how the existing system could be reoperated to improve conditions for fisheries upstream of the Delta, downstream of the Delta, and within the Delta itself.

CALFED should use the first phase of program implementation 1) to focus research and develop and implement adaptive management experiments to help improve understanding of the causes of fish mortality, and to 2) refine system management to provide for increased species benefits. For example, great gains for fish protection may be achieved by shifting the timing and volume of diversions from the Delta and using releases from upstream storage to provide improved instream conditions and operational flexibility.

CALFED should not look for the "silver bullet" solution to fisheries protection in the Delta because it does not exist. Each of the Delta alternatives could potentially result in some level of benefit and impact for each of the species of concern, but none of the existing alternatives provides benefits for all species and lifestages. Rather CALFED should implement, monitor, and assess as many "ecosystem restoration" efforts as possible including flow/hydrograph restoration, shallow water habitat restoration, screening of diversions, riparian corridor restoration, improved interactions between floodplains and channels, sediment management, and watershed planning among them. In total, CALFED should aim to identify areas of uncertainty as far as fisheries protection is concerned, under current operational conditions, and then figure out how to address these knowledge gaps over the next 5-7 years while implementing common program elements.

C. Operations

CALFED has established a policy that it will improve conditions for both water users and the environment. In this context, it has generally evaluated operational criteria consistent with the 1995 Water Quality Control Plan and limited implementation of the Department of the Interior's policy for implementation of Section 3406(b)(2) of the Central Valley Project Improvement Act. Any additional water, not specifically required to be dedicated toward environmental purposes under these or other laws, is treated as available to be developed, in spite of its benefits for the environment and in spite of the need for increased stream flow and Delta outflow identified in the ERPP itself.

CALFED's alternatives propose to develop this water in the following four ways:

1.) Expanding use of the State Water Project's additional export capacity. Current permits allow the SWP's Banks pumping plant to export 6600 cubic feet per second (cfs), with occasional

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wintertime exceptions. Several CALFED alternatives (1C, 2 and 3) would allow this amount to be increased to 10,300 cfs. The incremental yield generated by use of this additional capacity could be used to offset reductions in Delta exports at especially sensitive times, perhaps to offer timely protection to outmigrating spring-run. Instead, however, this additional capacity is operated solely to increase yield, with no benefit to the environment, and an unevaluated level of impact to fisheries.

2.) Allowing Central Valley Project demand to be met through use of the State Water Project's unused capacity. This use of a "joint point of diversion" has long been acknowledged as environmentally damaging. The State Water Resource Control Board's current Water Rights Order 95-6 recognizes this threat and allows use of a joint point of diversion only if it will benefit the environment and not result in a net increase to exports. All of the CALFED alternatives, however, would provide all benefits from use of a joint point of diversion to water users, and do not appear to evaluate environmental impacts.

3.) Assuming that diversions into an isolated facility do not count as Delta inflow (e.g., in studies such as 547-in part-,551, 555 & 567). The Export/Inflow (E/I) ratio, as well as the X2 standard are the cornerstones of protection under the 1995 Water Quality Control Plan. The E/I ratio was incorporated within the Bay/Delta Accord with the full knowledge that it was, at least in part, a surrogate for other additional protection. Indeed, under the WQCP the E/I ratio is projected to be constraining more often than X2 (this diminished level of protection is shown in Figure 2, which compares the X2 performance of two studies, 529 and 551, with similar physical configuration but different assumptions regarding the E/I ratio).

Not counting diversions into an isolated facility as part of Delta inflow, is essentially an accounting trick to allow an isolated facility to generate yield by circumventing existing standards. It should also be noted that the E/I ratio calculation is not accurate and is biased in terms of favoring an isolated facility. The ratio is calculated with exports being equal to the Delta inflow to Clifton Court Forebay for export at Tracy and Banks, while the actual amount of water diverted from the Delta also includes the North Bay Aqueduct, the Contra Costa Canal and diversions onto Delta islands. When water is diverted into an isolated facility resulting in less Delta inflow, these three "exports" not included in the calculation comprise a bigger piece of the inflow. Consequently, the reduction of inflow to the Delta increases the error in the calculation of the export/inflow ratio.

4.) Diversions to new storage, both offstream and off-aqueduct. Use of offstream storage to enhance Delta exports increases the potential for entrainment of fish. In fact, any additional point of diversion would double exposure of fish to these impacts.

Each of these methods of water development create environmental impacts that have not been fully documented or addressed in the DEIR. The WQCP together with CALFED's ERPP and CVPIA implementation may not offer the full range of protection necessary for full restoration of

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the ecosystem, especially if additional water is removed from the environment in any of these ways.

Furthermore, in at least some, and perhaps all, of CALFED's DWRSIM studies, the additional water needed to meet the ERPP flow targets is underestimated by about 50%. For example by our calculations, under Study 518 (No facilities, assumed acquisitions to meet ERPP targets, assumed permission for the CVP to use available SWP pumping capacity) DWRSIM's projections indicate that an annual average of 152 TAF of "add water" is used to meet otherwise unmet ERPP targets. Our calculations show that under this scenario an additional 157 TAF would be required to fully implement the draft ERPP targets. We urge CALFED to revise its analyses to ensure that the full ERPP flow requirements are met under all scenarios, and to identify the potential sources for this water.

IV. Assurances

An assurances package is a basic element of the CALFED Program. While we recognize that absolute guarantees may not be attainable under all circumstances, an assurance package should provide a high degree of confidence that the program's substantive goals will be met.

The acceptability of other program elements, such as increased groundwater storage, will turn in part on the strength of the associated assurance mechanisms in the package. For example, a facility with no legal remedies or binding contracts associated with its operation is far less likely to pass muster than an adequately constrained facility. An ecosystem restoration program without long-term funding attached to it will fail to gain public confidence as well. For this reason, the assurance proposal cannot be prepared sequentially, after the substantive proposals have been completed, but rather must be fully integrated into the alternatives.

The draft EIS/R defines assurances as "mechanisms necessary to assure that the solution will be implemented and operated as agreed." However, what it provides to the public and decision makers is instead an "implementation strategy" -- an entirely different thing. Putting a program in place or on a schedule is not the equivalent of building into that program guarantees of performance. It is not difficult to imagine the ERPP being "implemented" with little ecosystem recovery actually occurring. Moreover, without a serious examination of assurance issues, the chances of successful implementation are minimal.

The draft EIS/R fails entirely to provide the public or decision makers with a sense of the options available to assure the program elements. The draft never asks the basic question: What do we need to do to ensure that the Ecosystem Restoration Program (or any other program) is fully implemented so as to achieve its substantive goals? The draft lists "tools," and "management structures," and "guidelines" for an assurance package, but it never sets forth the basic elements necessary to guarantee that the ecosystem restoration program will achieve its objectives.

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For example, ecosystem restoration will not be achieved without a secure source of both water and funding. There is no discussion in the EIS/R of the alternatives available to achieve these assurances. The draft EIS/R fails as well to evaluate the potential environmental impacts associated with different assurances approaches. For example, using water transfers to assure the water necessary for the restoration program could result in very different environmental impacts than the dedication of water through an environmental water right.

It is revealing that neither the EIS/R nor the technical appendices deal directly with assurances but instead approach this issue through the more limited question of how to "implement" the program. However, the Implementation Strategy fails to identify, much less examine assurance issues but focuses instead on the "process" for obtaining public consensus. While consensus is laudable and important, the CALFED agencies are still obligated to provide full and clear information to the public about assurances issues regardless of the work group's progress. The draft EIS/R even fails to mention the one assurance issue that enjoyed unanimous consensus; the notion that the Ecosystem Restoration Program should be implemented by a new entity.

The purpose of an assurance package should be to ensure program outcomes. For example, in the case of the Ecosystem Restoration Program and the Conservation Strategy, this means that the assurances package should have as its objective achievement of the performance standards established for the restoration efforts. Similarly, performance standards should be established for the other program elements, and the assurances package should be tied to achieving those goals.

For the ecosystem restoration element, the revised EIS/R should examine the package of assurance mechanisms listed below:

1. Strong ERPP with measurable performance standards
2. Legal mandates to achieve performance standards
3. Institution dedicated to program implementation with sufficient authority
4. Provision of environmental water
5. Secure, adequate, and pliable long-term funding for ecosystem restoration and water acquisition
6. Enforcement of baseline environmental statutes
7. Physical constraints on new water developments
8. Controls on water project operations
9. Phasing/linkages of program elements
10. Remedies in the event that program commitments are not fulfilled

V. Finance

The position of the EWC is that water users, not the public, should pay for the costs of all water supplies developed for their benefit. In addition, given the tens of billions of dollars in public subsidies already provided for statewide water development in the past, and the massive environmental damage that is a direct result of such historic subsidy policies, no new or

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additional public subsidies should be provided for water development projects or programs that are meant to facilitate the depletion of additional water from the Bay/Delta system. One way or another, the longstanding practice of giving the public's water away for free must come to an end

There are elements of the CALFED program for which EWC would support public-private partnership funding. Specifically, we would support such funding for 1) programs that will provide above-baseline ecosystem restoration benefits., 2) programs which will serve to reduce overall water use (e.g., conservation and demand management), and 3) programs which ensure that more end uses can be served without any increase in baseline depletions (i.e., increased end-use efficiency investments, water recycling, etc.)

Beneficiaries Pay
According to the Phase II Draft, "[s]haring the costs of the Solution based on the benefits being created is the cornerstone principle of the CALFED Financial Strategy." (Implementation Strategy, page 15.) While EWC supports the basic notion that those who would benefit from newly developed supplies should pay the "true costs" associated therewith, the benefits-based approach is of ongoing concern in at least two fundamental respects.

- No Acknowledgment of How We Got Here The fundamental philosophy behind the benefits-based approach is that "costs will be paid for by the beneficiaries of the actions, as opposed to seeking payment from those who, over time, were responsible for causing the problems being experienced." This, in effect, means that the "playing field" is assumed to be level, all but sweeping under the rug nearly a century's worth of water development activities that have, by virtue of all but ignoring their associated environmental impacts, necessitated CALFED's programmatic efforts in the first place. Taken literally, this version of the benefits-based approach precludes any assessment whatsoever of, among others, a host of historic investments and subsidies biased substantially in favor of environmentally-damaging water development, prior unmet environmental mitigation obligations, the ongoing environmental costs of diversions, depletions, exports, impoundments, and pollution from existing facilities, or the related environmental costs of new water development.

- Problematic Definition of Ecosystem Benefits The second major concern relates to the definition of ecosystem benefits. One aspect of the problem is the need to distinguish between alleged "benefits" and much-needed "repairs." Another is the difficulty in quantifying any number of non-market benefits (and costs). But most egregious is the assertion that the environment needs new and/or bigger dams, or massive new isolated conveyance canals, in order to deal with problems that have arisen, above all, from the construction and operation of thousands of dams, thousands of miles of levees and canals, and literally billions of dollars in related water development investments.

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The extreme consequences of a benefits-based approach so-defined would be (1) to preclude user-fee assessments or other forms of use-based funding to assist in implementing the CALFED ecosystem restoration program over time, and (2) to provide a thinly-veiled justification for public funds to underwrite a new round of water project development – funds that would, once again, serve to understate the true cost of new or expanded dams, diversions, and depletions – i.e., costs that most of the principal proponents of such facilities simply cannot afford.

The CALFED Phase II Draft identifies as an outstanding issue "whether or not any adjustment for past impacts is appropriate prior to using the benefits [based] approach." (Implementation Strategy, page 15.) EWC believes that these adjustments are critically important to ensure that CALFED develops and implements a truly "equitable" result over time – one that acknowledges the problems of the past and sends the right market price signals in the future.

A draft document currently under discussion in the BDAC Finance Workgroup -- *Beneficiaries Pay: Implications for Cost Allocation* – goes a step beyond the Phase II Draft in attempting to sort-through and resolve these important outstanding issues. While it continues to discount the importance of better understanding how it is we got to where we are today, it proposes in lieu thereof a "forward looking" alternative that includes at least several promising features. These include (1) a proposed surcharge on all water users in the Bay-Delta system, the revenues of which will be used to assist in funding the CALFED common programs, (2) clarification that "the users of [storage and conveyance] facilities must pay the full cost of [these] facilities," (3) assurance that the share of any such facilities dedicated to ecosystem purposes will be treated as a mitigation cost for ongoing water development impacts (i.e., not charged to the public), and (4) assurance that, if public funds are provided for facility planning purposes, they will be cost-shared by user funds "up front" and reimbursed by the eventual contractors should such facilities be constructed.

There are, of course, many important details in this refinement that still need attention – for example, the definition of "ongoing impacts" is currently limited to so-called "direct" impacts (e.g., entrainment), and does not appear to consider such factors as hydrograph alterations, loss of sediment, loss of upstream, riparian, and wetland habitat, water quality and temperature effects, evaporation, depletion, etc. However, on balance, it is clearly a step in the right direction, with one significant exception: we cannot, and should not, sweep the past under the rug.

A more comprehensive accounting of <u>all</u> aspects of Bay-Delta water development (i.e., investments, repayments, rebates, subsidies, mitigation and restoration outlays, etc.) is essential to inform CALFED's efforts to resolve the "financial baseline" issue, and would thus help to ensure an "equitable allocation of program costs" moving forward – one that all might support.

Recommendations
CALFED should use the following approach as a basis for guiding the proposed use of public funds in the future to ensure an appropriate, equitable, and durable long-term result:

- The ecosystem restoration program (as well as other common programs) should be implemented through a combination of public and use-based funds, including the funds necessary to secure restorative ecosystem flows when and where needed through direct re-acquisition of water and habitat and acquisition of related interests;[8]

- Any new surface storage and conveyance facilities that are ultimately approved should be treated as new water projects and, if implemented, paid for in full – based on their full financial and ecosystem costs, and including a annual "rental charge" for depletion of the public's water -- by their direct beneficiaries (water and power users, floodplain residents, etc.), not by the public at large; and

- Any final dedications of new storage or conveyance capacity, yield, etc. to alleged "ecosystem" purposes should be treated as partial mitigation for the new and ongoing direct and indirect ecosystem impacts that are certain to accompany such facilities.

Above all, whatever CALFED does, it should ensure that, at long last, the true costs of developing and using the public's water -- financial, environmental, and otherwise, including both ongoing impacts and any "newly developed" supplies – are fully internalized in future water prices and paid for by the direct beneficiaries of those investments. To this end, any number of "conventional" cost allocation practices – low-interest, interest-free, and deferred repayment provisions, payment capacity waivers, purported recreational as well as fish and wildlife enhancements, non-reimbursable flood control benefits, and the like – must be discarded: the adverse environmental impacts associated with such policies and practices are well documented, and they simply have no place in the future implementation of a "balanced" CALFED solution.

VI. No Action Alternative

The No Action Alternative is critical in establishing the baseline from which the project alternatives will be evaluated. CALFED's No Action Alternative contains numerous flawed assumptions.

As discussed above, in a number of instances the No Action alternative relies on conclusions in DWR's Bulletin 160-93 or 160-98. Bulletin 160, however, is fundamentally flawed because it

[8] For these purposes, a broad-based set of watershed charges linked to diversions, depletions, exports, impoundments, and water quality degradation factors should be used to build upon the payments already required by existing law (e.g., the mitigation and restoration surcharges and increased revenues that fuel the CVPIA Restoration Fund).

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lacks basic economic criteria necessary to address the balance between supply and demand. (See the attached comments recently submitted by members of EWC to DWR concerning draft Bulletin 160-98.)

Because of its methodological flaws, Bulletin 160 consistently overestimates the demand for water in California and underestimates the ability of water conservation to address demand. Perhaps the most glaring instance of the No Action alternative's misplaced reliance on Bulletin160 is the assumption of up to 1.2 million acre-feet of additional diversions. (See for example the DEIS/R p.2-6 and p. 6.1-11). CALFED's No Action alternative, as currently drafted, has incorporated these significant flaws. Therefore, we strongly urge you to reconsider your reliance on Bulletin 160.

The No Action alternative errs in assuming that there will be very little or no change between existing conditions and conditions in 2020, in numerous key instances, including but not limited to:

- The assumption of no new listings under the state and federal endangered species acts (notwithstanding the assumption of over one million acre feet of additional diversions; NMFS's proposed listing of the spring-run chinook salmon; the California candidate species status of the spring-run chinook salmon; NMFS's recent listing of the steelhead trout as a threatened species; and numerous pending petitions to list both aquatic and terrestrial species within the CALFED project area);

- The assumption that only 45,000 acres of drainage-impaired lands in the San Joaquin Valley will be retired, notwithstanding the findings of the "Rainbow Report," $50 million in funding over the next five years for the CVPIA land retirement program; and roughly 30,000 acres in offers by willing sellers in just one year of the CVPIA land retirement program; and

- The assumption that Trinity River instream fishery releases will remain at 340,000 af, notwithstanding that this is the minimum amount established in § 3406(b)(22) of the CVPIA and that the Trinity River Flow Evaluation Study is considering flows ranging from 369,000-815,000 depending on water year type

The No Action alternative leaves many unanswered questions. For example, while it assumes the "dedication of 800,000 af" by 2020, it says nothing about how that water will be dedicated or whether populations of anadromous fish will be doubled by then, as required by federal law and by the narrative salmon standard in the Bay-Delta Accord. In addition, the No Action alternative fails to discuss what happens to the water associated with retired lands.

VII. CEQA/NEPA Compliance

The draft EIS/R fails entirely to meet the legal requirements for a sufficient programmatic review under CEQA and NEPA. Programmatic EISs and EIRs have the same fundamental purpose as

site specific EISs and EIRs: to inform the public and decision-makers of a program's environmental consequences before decisions are made. A programmatic EIS/R must provide the basis for decision-makers to determine whether subsequent actions may have significant environmental effects. It should address the environmental effects of the proposed program specifically and comprehensively.

To the extent that the EIS/R omits relevant information, it effectively precludes the informed decision making that is the central objective of CEQA and NEPA. Thus, for example, the EIS/R must consider alternatives that would substantially avoid or reduce the adverse impacts of the program, even if such alternatives would impede to some degree the attainment of the project objectives. Similarly, the document must contain enough information about each alternative to allow meaningful evaluation and comparison of impacts.

Thus it is not sufficient for a programmatic EIS/R to merely provide general policy guidelines as to relevant environmental factors; it must ensure that decision-makers consider all of the specific and particular consequences of its actions and the alternatives available to them. This standard is particularly crucial at the programmatic analysis conducted in the programmatic review. CALFED may not defer analysis of key environmental impacts to the project specific stage. As the courts have found, "tiering is not a device for deferring identification of significant environmental impacts that the adoption of a specific [alternative] can be expected to cause." Stanislaus Natural Heritage Project v County of Stanislaus, 48 Cal. App. 4th 182 (1996). The adequacy of the environmental impact analysis in the CALFED EIS/R is all the more important since the agencies intend to use this document as the project specific environmental review for at least part of the program.

The draft EIS/R must be substantially revised and expanded to provide the public and decision-makers with the information necessary to make sound decisions about the CALFED Bay-Delta program.

VIII. Public Involvement

The true stakeholders in the Bay/Delta program extend far beyond the interest groups identified as "stakeholders" by CALFED. While CALFED recently has made some progress in reaching this larger audience, we believe that CALFED still must improve its outreach to traditionally disenfranchised communities. In order to truly engage communities of color and low-income communities, CALFED must go beyond distributing written materials and media releases and commit to seeking out and facilitating broad involvement by providing translators to enable these groups to participate in CALFED, holding facilitated meetings, and co-sponsoring outreach with community organizations.

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IX. Conclusion

In closing, we continue to believe that CALFED offers a tremendous opportunity to address the underlying problems that have brought the Bay/Delta ecosystem to its current degraded condition, and to craft a solution that restores this precious natural system. The questions that CALFED seeks to answer are complex. We urge you to take the time necessary to craft a durable solution, and to refrain from making any irretrievable commitment of resources until you can better answer the many questions we and others have raised about how the proposed solutions are likely to perform, Finally, we urge you to continue to rely on the public process, which is what gives the CALFED program its credibility.

Thank you for considering our comments.

Sincerely,

Ronnie Cohen
Natural Resources Defense Council

John Beuttler
Fishery Foundation of California

Jean Auer
EWC

Martha Davis
Mono Lake Committee

Gary Bobker
The Bay Institute

Arthur Feinstein
Golden Gate Audubon Society

Roberta Borgonovo
League of Women Voters of California

Zeke Grader
Pacific Coast Federation of Fishermen's Associations

Craig Breon
Santa Clara Valley Audubon Society

Elise Holland
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Waldo Holt
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Richard Izmirian
California Sportfishing Protection Alliance

William Jennings
DeltaKeeper

Cynthia Koehler
Save San Francisco Bay Association

Mike Lozeau
BayKeeper

Tom Martens
Mountain Lion Foundation

Tim Ramirez
Tuolumne River Preservation Trust

Betsy Reifsnider
Friends of the River

Sam Schuchat
California League of Conservation Voters

Barbara Salzman
Marin Audubon Society

Linda Sheehan
Center for Marine Conservation

Dan Sullivan
Sierra Club

Greg Thomas
Natural Heritage Institute

David Yardas
Environmental Defense Fund

Marguerite Young
Clean Water Action